



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,996	10/19/2004	Ping-Sheng Chen	MTKP0111USA	5995
27765 7590 08/10/2007 NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			EXAMINER PHAM, VAN T	
			ART UNIT 2627	PAPER NUMBER
			NOTIFICATION DATE 08/10/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

winstonhsu.uspto@gmail.com
Patent.admin.uspto.Rcv@naipo.com
mis.ap.uspto@naipo.com.tw

Office Action Summary	Application No. 10/711,996	Applicant(s) CHEN ET AL.	
	Examiner VAN T. PHAM	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments filed on 5/18/2007 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant admitted prior art (hereafter AAPA) in view of Takamiya et al. (US 2003/0046599) and further in view of Minami et al. (US 6,331,966).

Regarding claim 1, AAPA discloses a method for handling an interrupt request in an optical storage drive when the optical storage drive executes a control procedure or operation, the method comprising:

utilizing the optical storage drive to receive an interrupt request from a control circuit after execution of the control procedure or operation has begun (see [0005], Fig. 1);

when the interrupt request is a read command, checking whether data indicated by the read command is stored in a buffer (see Figs. 1-2 and their descriptions); and

when the indicated data is stored in the buffer, transferring the corresponding data to the control circuit from the buffer to respond to the interrupt request (see Figs. 1-2 and their descriptions).

Takamiya discloses an Sd memory card host controller supplies a clock to an SD memory card and issues a read command, which is checking whether the interrupt request is a read command (see Fig. 9 and [0076]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a step of checking whether the interrupt request is a read

command in AAPA suggested by Takamiya, the motivation being in order to process further operations (see Takamiya Fig. 9).

Moreover, Minami et al. (US 6,331,966) discloses a method for handling an interrupt request in an optical storage drive when the optical storage drive executes a control procedure or operation, the method comprising: utilizing the optical storage drive to receive an interrupt request from a control circuit after execution of the control procedure or operation has begun; respond to the interrupt request in parallel with the execution of the control procedure or operation (see col. 10, the seeking control can be simultaneously executed in parallel with the writing access or reading access in response to an upper command by the MPU 12).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a step of respond to the interrupt request in parallel with the execution of the control procedure or operation in the combination of AAPA and Takamiya suggested by Minami, the motivation being in order to improve the responding time.

Regarding claim 2, the combination of AAPA, Takamiya and Minami, discloses the method of claim 1, wherein the buffer is a volatile memory of the optical storage drive (see AAPA Fig. 1).

Regarding claim 3, the combination of AAPA, Takamiya and Minami, discloses the method of claim 1, wherein the buffer is a register of the optical storage drive (see AAPA [0003]).

Regarding claim 4, the combination of AAPA, Takamiya and Minami, discloses the method of claim 1, wherein the control circuit is a host computer (see AAPA Fig. 1).

Regarding claim 5, the combination of AAPA, Takamiya and Minami, discloses the method of claim 1, further comprising: if the data indicated by the read command is not stored in the buffer, suspending handling the interrupt request (see AAPA Fig. 2).

Regarding claim 6, see rejection above of claim 1.

Regarding claims 8-12, see rejection above of claims 1-5, respectively.

Regarding claim 7, the combination of AAPA, Takamiya and Minami, discloses the storage medium of claim 6 being a non-volatile memory (see Fig. 1).

Regarding claim 14, see rejection above of claim 7.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Cited References

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The cited references relate to a command interruption is performed by executing the command of the reading or writing request from the host computer (US 5721717).

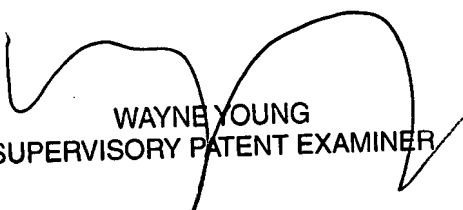
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN T. PHAM whose telephone number 571-272-7590. The examiner can normally be reached on Monday-Friday.

Art Unit: 2627

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP


WAYNE YOUNG
SUPERVISORY PATENT EXAMINER